

REMARKS/ARGUMENTS

Claims 1, 3, 6, 7, 9-12 and 14-23 are unchanged. Claims 2, 4, 5 and 13 are canceled and new claim 24 is added. Claim 8 was previously canceled. No new matter is added.

Claims 1-7, 9-17 and 19-23 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Bruyere et al. (US 2004/0057791) in view of Girotti (US 5,046,884).

Claim 18 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Bruyere et al. and Girotti in view of Lohrman (US 5,145,278).

Claim 1 is amended to include the subject matter of canceled claims 2, 4 and 5. Amended claim 1 defines a lightweight, portable roadway barrier, wherein the weight of the barrier is less than 200 kg per metre of length of the barrier, wherein the barrier is a stand alone barrier in that it does not require additional mass to function as a barrier, and wherein the barrier comprises (a) a structural framework and (b) panels mounted to opposite sides of the barrier. The claim defines that the purpose of the structural framework is to resist collapse of the barrier in response to impact of a vehicle. The purpose of the panels is to deflect a vehicle on impact with the barrier. The claim requires that the structural framework comprises an assembly of (i) upright members at opposite ends of the barrier, (ii) at least one upright member between the end members, and (iii) at least one longitudinal member extending along the length of the barrier and connected to each of the upright members. The claim further requires that the internal structural framework provides sufficient rigidity for resisting collapse of the barrier in response to vehicle impact, that the principal function of the side panels is to deflect a vehicle on impact of the vehicle against the barrier, and that the side panels do not make a substantial contribution to the rigidity of the barrier. The structural framework of claim 1 is a combination of upright members and longitudinal members that are connected together.

In contrast, Bruyere et al. discloses a roadway barrier that comprises upright members 11, 13 at opposite ends of the barrier and intermediate upright members 12 positioned between the ends and panels 6, 7 on opposite sides of the barrier. Bruyere discloses that the panels 6, 7 are connected to and supported by the upright members 11, 12, 13. There is no disclosure that the Bruyere barrier comprises at least one or more longitudinal member that interconnects the upright members 11, 12, 13. This is a significant point because it is a clear indication that Bruyere has not appreciated a fundamental basis of the present invention. Specifically, Bruyere

does not teach or suggest separating the structural requirements to resist collapse and the side deflection requirements of a barrier. Separation of the two requirements of a barrier makes it possible for the barrier to be lightweight and effective as an impact absorbing member that resists collapse and a member that can deflect vehicles.

The Examiner acknowledges that feature 16 is shown in a drawing of a Bruyere et al., but is not described in Bruyere et al. and then comments that “*However, element (16) appears to be an opening or a passageway.*” However, such an assumption is based upon impermissible hindsight. An equally plausible conclusion is that the element 16 is a drawing error. It is also possible that element 16 is a protrusion.

Having assumed that the element 16 is an opening (which the Applicant does not concede), the Examiner then argues in the Office action that it would have been obvious to a person skilled in the art to position a length of rebar of the Girotti reinforced concrete barrier to extend through the opening of element 16 thereby “*strengthening the barrier against impacts*” and concludes that the subject invention defined in claim 1 and a number of dependent claims is obvious.

Girotti discloses positioning rebar in a concrete barrier. The barrier does NOT have “*upright members at opposite ends of the barrier*” as required by subject claim 1. The Girotti barrier has ends, which are essentially the ends of the cast concrete of the barrier. The Girotti barrier also has stirrups embedded in the ends, and the rebar is connected to the stirrups. It is a considerable stretch of the imagination to say that it is obvious to incorporate one or more than one Girotti rebar in the device of Bruyere.

Girotti does not disclose connecting the rebar to intermediate upright members. Inserting rebar to extend through an opening in an upright member does not of itself mean that the intermediate upright member and the rebar are “*connected*” together as defined in claim 1 or claim 24. It is not obvious to connect the Girotti rebar to the Bruyere upright member.

In the Office action, the Examiner comments in relation to claims 2, 4, and 5 (now included in amended claim 1) that Bruyere discloses an internal structural framework for a barrier that has sufficient rigidity for resisting collapse of the barrier in response to a vehicle impact and the side panels “*principally function to deflect a vehicle on impact*”. The Examiner refers to paragraph [0015] of Bruyere to support this position. However, this paragraph refers to

the “*elongated elements*”, i.e. the barriers, as a whole and does not discuss the relative contributions of the components of the barrier to the functions of the barrier that are important to the performance of the barrier as a “*barrier*”. These functions are the functions of providing structural rigidity to resist the collapse of the barrier on vehicle impact and a capability of deflecting a vehicle from the barrier. When one stands back and considers the actual disclosure in Bruyere *as a whole*, it is clear that Bruyere requires a mechanical interrelationship of a combination of (a) the side panels, (b) the upright end members, and (c) the intermediate upright members to provide the functionality to enable the barrier to function as a “*barrier*”. This mechanical interrelationship is a result of the side panels 6, 7 of Bruyere being bolted or otherwise fastened to the end/intermediate upright members. This combination of components forms a box structure that has structural rigidity and a capability for deflecting vehicles. However, each component of this combination is not optimised for one or other of the functions of structural rigidity and a capability of deflecting a vehicle.

In contrast, the present invention separately optimises different components of the barrier to provide these functions. The barrier is formed with an internal framework that provides the structural rigidity. The barrier is also formed with side panels that provide the deflection capability.

Amended claim 1 includes the subject matter from cancelled dependent claims 2, 4 and 5. New claim 24 includes the subject matter of claim 1 and cancelled claim 13. Claims 1 and 24 highlight the selection of the structural framework and the selection of the side panels to have different functionality to contribute to the performance of the barrier as a “*barrier*”.

Modifying the Bruyere barrier to include one or more than one Girotti rebar may improve the structural rigidity of the barrier but it will not change the fact that the Bruyere barrier is based on a box structure where the combination of the components provide the functions and the functions are not separately optimised in different components as is the case with the subject invention.

Lohrman does not teach or suggest a structural framework including a combination of upright members and longitudinal members that are connected together, as required by claims 1 and 24. Therefore, Bruyere, Girotti and Lohrman, taken alone or in combination, do not teach or suggest each and every element of claims 1 and 24. Therefore, claims 1 and 24 are patentable

over Bruyere, Girotti and Lohrman. Claims 3, 6, 7, 9-12 and 14-21 depend from claim 1 and are allowable for the same and other reasons not specifically mentioned herein. Reconsideration of the prior art rejections is respectfully requested.

Respectfully submitted,

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